Model 8301F-0.0001-P27
INERTIAL SENSOR DATA SHEET

General Characteristics

- Operating Principle: Fluid Rotor Inertial Angular Displacement Sensor
- Application: Spacecraft and Terrestrial Angular Sensing
- Size and Mounting: Per Outline Drawing (see pg 2)
- Weight: 165g (estimated)
- Input Power: ±15V, 30 mA Maximum

Performance Characteristics

- Range: ±100μRad (±10 V)
- Voltage Scale Factor (VSF): 100,000 V/Rad
- VSF Temperature Coefficient: 0.09% per °C
- Threshold: < 1 nrad
- Null Output: 30 mV
- Noise: 50 nRad RMS Maximum, 2 Hz to 200 Hz
- Frequency Range: 2 Hz to 2000 Hz
- Frequency Response Flatness: 10%, 2 Hz to 70 Hz; 3.5%, 70 Hz to 500 Hz
- Phase Response Tolerance: 6.0 Degrees, 70 Hz; 4.0 Degrees, 140 Hz to 500 Hz
- Damping Ratio: 0.5 to 0.9
- Alignment: 17 mRad (1 degree)
- Linear Acceleration Sensitivity: 200 μrad/g, 2 Hz (decreases at 12dB/octave)
- Cross Axis Sensitivity: 0.2%
- Output Impedance: 200 Ω, Maximum
- Insulation Resistance: 1000 MΩ, 50 VDC
- Overload Recovery: 7 seconds

Environmental Capability

- Operating Temperature: -18 to +70 °C
- Storage Temperature: -54 to +74 °C
- Vacuum: 10^-11 Pa
- Vibration: 30g RMS, 20 Hz to 2000 Hz
- Linear Acceleration: 100g (any direction)
- Shock: 100g (11 ms half sine)